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EXAMINER	
SINKANTARAKORN, PAWARIS	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,208	MCGEE ET AL.	
	Examiner	Art Unit	
	Pao Sinkantarakorn	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see applicant's remarks page 3 lines 8-10, filed 05/09/2007, with respect to the rejection(s) of claim(s) 14 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference(s).

2. Claims 1-29 are pending.

Claim Objections

3. Claims 1-13, 21-29 are objected to because of the following informalities:

Regarding claim 1 line 7, the term "Network Interface Controller" should be inserted after "different" and the term "NIC" should be changed to ---(NIC)---. The same is true for claim 21 line 6, claim 23 line 11, and claim 28 line 13.

Claims 2-13, 22, 24-27, and 29 are then objected because they depend on the objected claims.

Appropriate correction is required.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,272,113 in view of Banga et al. (US 6,895;429).

Applicant's claim 1 also discloses a network controller system for a computer, comprising: a plurality of network ports; and a driver system that operates the plurality of network ports; the driver system determining which of the network ports can be combined together to form a team having a common team network address to be used by external network logic; wherein each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

Claim 1 of U.S. Patent No. 6,272,113 discloses a network controller system for a computer, comprising: a plurality of network ports, each capable of being programmed with at least one address; a driver system that operates the plurality of network ports as a team and that programs each of the plurality of network ports with a common multicast address except the driver system determining which of the network ports can be combined together to form a team having a common team network address to be

used by external network logic; wherein each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single virtual interface, all of the physical interfaces respond to only one MAC address. The physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIntyre et al. (.

McIntyre et al. disclose, **regarding claim 1**, a network controller system (see Figure 2 reference numeral 202 and column 5 lines 43-45), comprising:

a plurality of network ports (see Figure 2 reference numeral 202 and column 6 lines 18-19); and

a driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) that operates the plurality of network ports (see column 6 lines 48-50);

the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) determining which of the network ports can be combined together to form a team (see

column 8 lines 59-65, the driver system determines whether each ports are connected to the other).

However, McIntyre et al. do not disclose a system/method, wherein a team has a common team network address to be used by external network logic and each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single virtual interface, all of the physical interfaces respond to only one MAC address. The physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Regarding claim 2, McIntyre et al. disclose a system/method, wherein the network ports (see Figure 2 reference numeral 202 and column 6 lines 18-19) include a first network port (see Figure 6 P2) and a second network port (see Figure 6 P3) and all of the network ports couple to at least one network device (see column 62-63), and

wherein the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) causes the first network port to transmit a packet to the second network port (see Figure 6, H1 from P2 to P3) and the second network port to transmit a packet to the first network port (see Figure 6, H2 from P3 to P2) to determine if the first and second network ports are coupled to the same network (see column 8 lines 59-65);

regarding claim 3, wherein each of the network ports transmit packets to all of the other network ports (see Figure 6, H1 and H2) to determine which of the network ports are coupled to the same network (see column 8 lines 62-65);

regarding claim 4, wherein the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) includes discovery logic that causes at least one pair of network ports to transmit test packets between each member of the pair (see column 8 lines 62-64) and the discovery logic determines whether each test packet is received by one port in the pair of network ports (see column 8 lines 60-62);

regarding claim 5, wherein the discovery logic determines that both members of the pair of network ports can be teamed together if both of the test packets are received by the ports (see column 7 lines 15-18 and column 8 lines 59-65);

regarding claim 6, wherein the discovery logic causes each of the network ports to transmit a test packet to all networks (see Figure 6, H1 and H2) and determines which of test packets are received (see column 8 lines 59-65);

regarding claim 7, wherein, based on determining which of the test packets are received, the discovery logic determines which of the network ports can be teamed together (see column 8 lines 62-65, the intermediate driver determines whether each

ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they can be combined to form a team);

regarding claim 8, wherein the discovery logic determines that at least one team can be formed from the network ports (see column 7 lines 2-4);

regarding claim 9, wherein the discovery logic determines that at least two team can be formed from the network ports (see column 7 lines 2-4);

regarding claim 10, wherein the discovery logic determines a status associated with a pair of network ports resulting from transmission of a pair of test packets between the network ports, the status comprising a status selected from the group consisting of no connectivity, one-way connectivity, partial connectivity, and full connectivity (see column 8 line 59-column 9 line 6 and column 9 lines 47-65)

regarding claim 11, wherein the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) determines that two or more network ports can be combined together to form a team if the two or more network ports have common layer 2 connectivity (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other. If they are connected, then they are in the same network; therefore, they have common layer 2 connectivity and can be combined to form a team);

regarding claim 12, wherein a plurality of the network ports are combined to form a team (see column 8 lines 59-65), the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) determines whether each ports are connected to the other. If they are connected, then they are in the same network and, therefore,

can be combined to form a team) and the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) determines whether all of the networks in the team continue to be eligible to remain in the team (see column 8 lines 59-61);

regarding claim 13, wherein the driver system (see Figure 3 reference numeral 310 and column 6 lines 48-50) includes validation logic that causes all of the network ports in the team to transmit test packets to all other network ports (see Figure 6, H1 and H2) in the team (see Figure 4A reference numeral 320) to determine if all of the network ports in the team have the same layer 2 connectivity (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other. If they are connected, then they are in the same network; therefore, they have common layer 2 connectivity and are still eligible as part of the team).

McIntyre et al. disclose, **regarding claim 14**, a computer system adapted to couple to one or more network devices, comprising:

a processor (see Figure 1 reference numeral 104);

a plurality of network interface controllers (NICs) coupled to the processor (see Figure 1 reference numeral 122); and

a controller subsystem that operates the plurality of NICs (see Figure 3 reference numeral 310 and column 6 lines 48-50), the controller subsystem (see Figure 3 reference numeral 310) determining which of the NICs are combinable as a team (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other).

However, McIntyre et al. do not disclose a system/method, wherein a team is assigned a network address to be used by external logic.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single virtual interface, all of the physical interfaces respond to only one MAC address. The physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Regarding claim 15, McIntyre et al. disclose a system/method, wherein the NICs (see Figure 2 reference numeral 202 and column 6 lines 18-19) include a first NIC (see Figure 6 P2) and a second NIC (see Figure 6 P3) and all of the NICs couple to at least one NIC (see column 62-63), and wherein the controller subsystem causes the first and second NICs to trade test packets (see Figure 6, H1 from P2 to P3, and H2 from P3 to P2) to determine if the first and second NICs are coupled to a common network (see column 8 lines 59-65);

regarding claim 16, wherein the controller subsystem (see Figure 3 reference numeral 310) causes at least one pair of NICs to transmit test packets between each member of the pair (see Figure 6, H1 from P2 to P3, and H2 from P3 to P2) and determines whether each test packet is received by one NIC in the pair of NICs (see column 8 lines 62-65);

regarding claim 17, wherein the controller subsystem (see Figure 3 reference numeral 310) causes each of the NICs to transmit a test packet to all networks to which the computer system couples (see column 8 lines 62-64) and determines which of test packets are received (see column 8 lines 60-62), and the test packets that are received determine which of the NICs can be combined together as a team (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other; if they are connected, then they can be combined to form a team);

regarding claim 18, further including an output device coupled to the processor (see Figure 1 display) and wherein a graphical representation showing which NICs can be combined together as a team is shown on the output device (see column 15 lines 56-59);

regarding claim 19, wherein a plurality of the NICs are combined as a team and the controller subsystem determines whether all of the NICs in the team continue to be eligible to remain in the team (see column 8 lines 59-65, the intermediate driver continuously and periodically determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they are still eligible as part of the team);

regarding claim 20, wherein the controller subsystem system (see Figure 3 reference numeral 310) causes all of the NICs in the team to transmit test packets to all other NICs (see Figure 6, H1 and H2) in the team (see Figure 4A reference numeral 320) to determine if all of the NICs in the team have the same layer 2 connectivity (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other. If they are connected, then they are in the same network; therefore, they have common layer 2 connectivity).

McIntyre et al. also disclose, **regarding claim 21**, a network controller system, comprising:

a plurality of network ports (see Figure 2 reference numeral 202 and column 6 lines 18-19); and

a means (see Figure 3 reference numeral 310 and column 6 lines 48-50) for determining which of the network ports can be combined together to form a team (see column 8 lines 59-65, the driver system determines whether each ports are connected to the other. If they are connected, then they are in the same network; therefore, they can be combined to form a team).

However, McIntyre et al. do not disclose a system/method, wherein a team has a common team network address to be used by external network logic and each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single

virtual interface, all of the physical interfaces respond to only one MAC address. The physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Regarding claim 22, McIntyre et al. disclose a system/method, wherein the network ports (see Figure 2 reference numeral 202 and column 6 lines 18-19) include a first network port (see Figure 6 P2) and a second network port (see Figure 6 P3) and all of the network ports couple to at least one network device (see column 62-63), and the means includes means for causing the first network port to transmit a packet to the second network port (see Figure 6, H1 from P2 to P3) and the second network port (see Figure 6, H2 from P3 to P2) to transmit a packet to the first network port and for determining if the first and second network ports are coupled to the same network (see column 8 lines 59-65, the means determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network).

Furthermore, McIntyre et al. disclose, **regarding claim 23**, a computer system, comprising:

a processor (see Figure 1 reference numeral 104);

a plurality of ports coupled to the processor (see Figure 1 reference numeral 122), the ports adapted to connect to a network (see Figure 2 reference numeral 202), the network to which one port connects being the same or different as the network to which another port connects (see column 6 lines 11-14), at least two of the ports are operated as a team (see column 6 lines 54-57); and

logic coupled to the ports, the logic determines whether the ports in the team continue to be eligible to be operated in the team (see column 8 lines 59-65, the intermediate driver continuously and periodically determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they are still eligible as part of the team).

However, McIntyre et al. do not disclose a system/method, wherein a team has a common team network address to be used by external network logic and each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single virtual interface, all of the physical interfaces respond to only one MAC address. The physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team

having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Regarding claim 24, McIntyre et al. disclose a system/method, wherein eligibility is determined based on test packets between pairs of ports in the team (see column 8 lines 62-65);

regarding claim 25, wherein the logic determines which of the ports may be operated as a team (see column 8 lines 59-65, the intermediate driver continuously and periodically determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they can be combined to form a team);

regarding claim 26, wherein the logic causes all of the ports not currently operated as part of a team to transmit test packets to all other ports to determine whether the non-teamed ports can be operated in a team (see column 8 lines 62-65, the intermediate driver determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they can be combined to form a team);

regarding claim 27, further including a display coupled to the processor (see Figure 1 display) on which information regarding which ports in the team can remain in the team and which cannot remain in the team (see column 15 lines 56-59).

McIntyre et al. also disclose, **regarding claim 28**, a method usable in a system comprising a plurality of ports (see Figure 1 reference numeral 122) operated as team (see Figure 4A reference numeral 320), the method comprising:

transmitting packets from each port in the team to all other ports in the team (see column 8 lines 62-64);

determining whether the packets are received (see column 8 lines 60-62);

determining which of the ports may continue to be operated in the team and which of the ports, if any, are ineligible to be operated in the team (see column 8 lines 59-65, the intermediate driver continuously and periodically determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they are still eligible as part of the team); and

providing information that indicates which ports are eligible to be operated in the team and which ports, if any, are ineligible to be operated in the team (see column 15 lines 56-59).

However, McIntyre et al. do not disclose a system/method, wherein a team has a common team network address to be used by external network logic and each network port in the team is associated with a different NIC, the NICs associated with the common team network address.

The invention of Banga et al. teach a system wherein the physical interfaces of network interface cards (NICs) and their associated links are aggregated as a single virtual interface, all of the physical interfaces respond to only one MAC address. The

physical interfaces are organized into one virtual pipe having one logical interface that is assigned a common MAC address (see column 6 lines 32-51).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a system, wherein plurality of network ports are formed a team, each team having a common team network address as taught by Banga et al. into the network controller of McIntyre et al.

The motivation for having a single network address per team to be used by external device is that it will prevent the shortage in network addresses in the future when the number of ports increases due to the size of the network expands.

Regarding claim 29, McIntyre et al. disclose a system/method, wherein determining which of the ports may continue to be operated in the team and which of the ports, if any, are ineligible to be operated in the team (see column 8 lines 59-65, the intermediate driver continuously and periodically determines whether each ports are connected to the other. If they are connected, then they are coupled to the same network; therefore, they are still eligible as part of the team) includes determining that a pair of ports may continue to be operated in the team if at least some of the packets were received by both ports in the port from the other of the pair's ports (see column 8 lines 62-65, status of functionality of the NICs is a way of determining whether the packets are received by both ports).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER